

1 1. A method comprising:
2 implanting germanium at a dose greater than about
3 2E16 atoms/cm²; and
4 forming a P-type source/drain extension in the
5 region that has been implanted with germanium.

1 2. The method of claim 1 including implanting
2 germanium using an energy of at least 10 keV.

1 3. The method of claim 1 including implanting the
2 germanium to a depth greater than about 200 Angstroms.

1 4. The method of claim 1 wherein forming a P-type
2 source/drain extension includes implanting boron into the
3 region implanted with germanium.

1 5. The method of claim 1 including implanting the
2 germanium using sidewall spacers on a polysilicon gate
3 structure.

1 6. The method of claim 1 including forming a
2 strained source/drain extension.

1 7. The method of claim 1 including implanting a P-
2 type impurity into a region already implanted with
3 germanium.

1 8. The method of claim 7 including implanting
2 germanium and P-type impurity at a ratio greater than 1 to
3 1.

1 9. The method of claim 8 including implanting
2 germanium and P-type impurity at a ratio of approximately 4
3 to 1.

1 10. The method of claim 9 wherein implanting P-type
2 impurities includes implanting boron impurities.

1 11. A semiconductor structure comprising:
2 a gate; and
3 an implanted region including both germanium and
4 P-type impurities.

1 12. The structure of claim 11 wherein the ratio of
2 germanium to P-type impurities is greater than one to one.

1 13. The structure of claim 12 wherein the ratio of
2 germanium to P-type impurities is approximately four to
3 one.

1 14. The structure of claim 13 wherein said P-type
2 impurities are boron impurities.

1 15. The structure of claim 11 wherein said germanium
2 is implanted to a depth greater than about 150 Angstroms.

1 16. The structure of claim 11 wherein said implanted
2 region is a source/drain extension.

1 17. The structure of claim 16 wherein said implanted
2 region is a strained source/drain junction.

1 18. The structure of claim 11 including a polysilicon
2 gate.

1 19. The structure of claim 18 including a polysilicon
2 gate with side wall spacers.

1 20. An integrated circuit comprising:
2 a semiconductor structure;
3 a gate formed on said semiconductor structure;
4 and
5 a source and a drain region, said source and
6 drain region including both germanium and a P-type
7 impurity, said source and drain region being strained.

1 21. The circuit of claim 20 wherein the ratio of
2 germanium to P-type impurities is greater than one to one.

1 22. The circuit of claim 20 wherein the ratio of
2 germanium to P-type impurities is approximately four to
3 one.

1 23. The circuit of claim 20 wherein said P-type
2 impurities are boron impurities.

1 24. The circuit of claim 20 wherein said source/drain
2 region that includes both boron and germanium is a
3 source/drain extension.